REMARKS

Claims 1-46 are pending. By this Amendment, claim 12 has been amended to correct a minor informality, and claims 13 and 14 have been amended to depend from claim 11.

Applicants note with appreciation the consideration of the Supplemental Information Disclosure Statement ("IDS") filed August 5, 2002, as indicated by the returned Examiner-initialed copy of the PTO Form 1449 that accompanied this IDS. An electronic IDS was filed July 31, 2002 and another Supplemental IDS was filed April 18, 2003, before the first Office Action was mailed. Applicants respectfully request that these additional Information Disclosure Statements also be considered and that such consideration be indicated by return of Examiner-initialed copies of the PTO Forms 1449 that accompanied these Information Disclosure Statements.

Claims 1-4, 9-17, 19-25, 28-31, 36, and 39-42 were rejected under 35 U.S.C. § 102(b) as being anticipated by WO 99/64243. (Applicants note that although the Action refers to this PCT publication as "Sanderson et al.", the inventors are identified on this publication as Meade et al. Accordingly, this publication is referred to below as "Meade"). Claim 5 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Meade in view of U.S. Patent No. 6,451,483 to Chiang et al. ("Chiang"). Claim 5 was also rejected, along with claim 6, under Section 103(a) as being unpatentable over Meade in view of U.S. Patent No. 5,475,473 to Masuda et al. ("Masuda"). Claims 7, 8, 26, 27, 37, and 38 were rejected under Section 103(a) as being unpatentable over Meade in view of U.S. Patent No. 6,006,059 to Till et al. ("Till"). Claims 18, 32, and 43 were rejected under Section 103(a) as being unpatentable over Meade. Claims 33 and 44 were rejected under Section 103(a) as being unpatentable over Meade in view U.S. Patent No. 4,909,182 to Hanson et al. ("Hanson"). Claims 34 and 45 were rejected under Section 103(a) as being unpatentable over Meade view of U.S. Patent No. 5,671,675 to Okuda et al. ("Okuda"). Claims 35 and 46 were rejected under Section 103(a) as being unpatentable over Meade in view of U.S. Patent No. 3,990,132 to Illman et al. ("Illman"). These rejections are respectfully traversed.

As described in the specification of this application, ink jet printers have traditionally suffered from two major shortcomings: varying optical density on a printed image and excessive

ink drying time. Attempts have been made to correct these problems by precoating substrates before printing. Conventional precoating systems have their own problems, including long drying times for the coating material. Also, coat weight irregularity, which affects image quality, is a problem in precoating systems.

According to exemplary embodiments, techniques and devices are provided for coating substrates before printing to provide uniform images and minimize ink drying time.

Claim 1, for example, recites a coating apparatus for applying a coating liquid to a printing substrate. The apparatus includes a rotatable first roll having a surface energy and a rotatable second roll having a surface energy. The second roll is positioned adjacent to the first roll and defines with the first roll a first nip through which the printing substrate passes. The apparatus also includes a metering device for applying a layer of coating liquid onto the second roll, which in turn transfers the coating liquid to the printing substrate. The surface energy of the second roll is greater than the surface energy of the coating liquid.

Similarly, claim 22 recites a combination for use in a coating apparatus for applying a coating liquid to a coating substrate. The combination includes a rotatable first roll having a surface hardness and a rotatable second roll having a surface hardness. The second roll is positioned adjacent to the first roll, defines a nip with the first roll through which the printing substrate passes, and transfers the coating liquid to the printing substrate. The surface hardness of the second roll is greater than the surface hardness of the coating liquid.

The Action relies on Meade (WO 99/64243) for all the features recited in claims 1 and 22. Meade discloses a coating apparatus for use in an ink jet printer. The coating apparatus described in Meade includes a first roll, a second roll, and a metering device for applying supplying the second roll with a coating liquid for application to a substrate. Meade discusses selection of a coating liquid and selection of materials for the rolls. However, Meade does not disclose or suggest that the surface energy of the second roll is greater than the surface energy of the coating liquid as recited in claim 1. Also, Meade does not disclose or suggest that the surface hardness of the second roll is greater than the surface hardness of the coating liquid as recited in claim 22.

The Action asserts that any coating liquid may be used in Meade and apparently concludes that Meade inherently discloses that the surface energy and the surface hardness of the second roll are greater than the surface energy and the surface hardness, respectively, of the coating liquid. However, the Action does not indicate why it would necessary in Meade to have the surface energy/surface hardness of the second roll greater than the surface energy/surface hardness of the coating liquid and thus has failed to establish that these are inherent in Meade. It is well settled that inherency must be a necessary result and not merely a "possible" result. See, e.g., In re Oelrich, 666 F.2d 578 (CCPA 1981).

Since Meade fails to disclose or suggest (either explicitly or inherently) all the features recited in claims 1 and 22, these claims are considered allowable over Meade.

Independent claims 12 and 19 recite similar features as claim 1 and are considered allowable for at least the same reasons.

Claim 11 recites a coating apparatus for applying a coating liquid to a printing substrate. The apparatus comprises a rotatable first roll and a rotatable second roll. The rotatable second roll has a surface energy and is positioned adjacent to the first roll. The second roll defines with the first roll a first nip through which the printing substrate passes. The apparatus also includes a rotatable third roll contacting the second roll and forming a second nip therebetween. The apparatus further includes a doctor blade in contact with the third roll, the doctor blade applying a layer of coating liquid onto the third roll. The third roll transfers the coating liquid to the second roll. The second roll, in turn, transfers the coating liquid to the printing substrate. The hardness of the second roll is less than the hardness of the third roll.

The Action asserts that the features recited in claim 11 are shown in Meade and points, in particular to FIG. 2 and page 5, lines 1-20 of Meade. This portion of Meade describes a first roll 62, a second roll 64 and a third roll 66 depicted in FIG. 2 of Meade. While this portion of Meade discusses selection of the surface of the second roll, it does not disclose or suggest that the hardness of the second roll is less than the hardness of the third roll. This feature is also not disclosed or suggested in any other portion of Meade.

Since Meade fails to disclose or suggest all the features recited in claim 11, claim 11 is considered allowable over Meade.

Claims 25 and 36 recite a metering device for providing a layer of coating liquid to a coating apparatus, wherein the coating apparatus has a rotatable first roll and a rotatable second roll defining with the first roll a first nip through which a printing substrate passes. The metering device includes a rotatable third roll having a surface energy and a supply of coating liquid having a surface energy. The supply of coating liquid is in contact with the third roll. The metering device also includes a doctor blade for metering a layer of coating liquid onto the third roll. The doctor blade has a distal edge with a surface energy that contacts the third roll. Claim 25 further recites that the surface energy of at least a portion of the distal edge is less than the surface energy of the coating liquid. Claim 36 further recites that the surface energy of at least a portion of the third roll is less than the surface energy of the coating liquid.

The Action asserts that Meade shows all the features recited in claims 25 and 36, pointing, in particular, to page 5, lines 1-20 of Meade. Nowhere in this portion or any other portion of Meade is there a disclosure or suggestion that the surface energy of at least a portion of the distal edge of a doctor blade is less than the surface energy of the coating liquid as recited in claim 25 or that the surface energy of at least a portion of the third roll is less than the surface energy of the coating liquid as recited in claim 36. Therefore, claims 25 and 36 are considered allowable over Meade.

If the position is maintained that all the features recited in independent claims 1, 11, 12, 19, 22, 25, and 36 are shown in Meade, Applicants respectively request that it be specifically pointed out where in Meade each feature is described or suggested and/or that it be explained why each feature would be necessarily inherent in Meade.

Claims 2-10, 13-14 (as amended) and 15-18, 20-21, 23-24, 26-35, and 37-46 depend ultimately from claims 1, 11, 19, 22, 25 and 36, respectively, and are considered allowable for at least the same reasons.

For the foregoing reasons, all the claims are considered allowable. An early Notice of this effect is earnestly solicited.

A Credit Card Payment Authorization Form PTO-2038 authorizing payment in the amount of $110.00 for the fee for a large entity under 37 C.F.R. § 1.17(a)(2) and, and a Request for a One-Month Extension-Of-Time are enclosed. This amount is believed to be correct;

however, the Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 14-0629.

Respectfully submitted,

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Jennifer Pearson Medlin — 12/29/03 Date